

### REMARKS

Claims 1-7, 9-15, 17 and 18 are pending. Claims 1, 9, 17 and 18 are the independent claims.

Claims 1, 2, 5-7, 9, 10, 13-15, 17 and 18 were rejected under 35 U.S.C. § 103 over Center, Jr. in view of U.S. Patent 6,072,496 (Guenter et al.), U.S. Patent Pub. No. 2003/113002 (Philomin et al.), and U.S. Patent 5,369,726 (Kroeker et al.). Claims 3, 4, 11 and 12 were rejected under 35 U.S.C. § 103 over Center, Jr. in view of Guenter et al., Philomin et al. and Kroeker et al. and further in view of U.S. Patent 6,236,749 (Satonaka et al.). Applicant submits that the independent claims are patentable over the cited art for at least the following reasons.

Independent claim 1 recites, inter alia, a step of clipping a plurality of different local areas of the image by an area clipping section of the face metadata generating unit, the plurality of different local areas having, as centers, points previously set at regular intervals, a step of extracting frequency features for the respective local areas by a frequency feature extracting section of the face metadata generating unit, and a step of projecting feature vectors, which are vectors consisting of the frequency features, onto predefined subspaces using an orthonormal basis matrix by a vector projecting section of the face metadata generating unit.

Center, Jr., in order to find, e.g., an eye, performs a correlation operation between a template image and a region of interest (ROI) image to produce a correlation map. In Center, Jr., the features use, as inputs, intensity values at points in an image space, not frequency features.

The current Office Action, in the Response to Arguments, took the position that Center, Jr. processes an image in the frequency domain by DFFT and calculates components in terms of eigenfaces  $\mu_k$ . However, while a Fourier transform is used in Center, Jr. to calculate the correlation map obtained by the correlation operation at high speed, in the extraction of features using principal component analysis (PCA) as is described in paragraph [0110], the features use, as inputs, *intensity values*, as opposed to frequency features. See, e.g., Center, Jr. paragraph [0111]: “[t]he foregoing

[referring to the projection described in paragraph [0110]] is a result of initially characterizing each face image  $I(x, y)$  as a two-dimensional image having an  $N$  by  $N$  array of intensity values (8-bit)"

This is not the same as the limitation of claim 1 in which the projected vectors consist of the frequency features themselves. For at least this reason, Center, Jr. does not teach the recited projecting step.

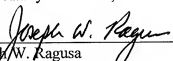
Applicant submits that the other cited references do not remedy the abovementioned deficiency of Center, Jr. as a reference against claim 1. For at least this reason, claim 1 is believed patentable over the cited art.

The other independent claims recite a similar feature and are believed patentable for similar reasons. The dependent claims are patentable for at least the same reasons as their respective base claims.

In view of the above remarks, applicant believes the pending application is in condition for allowance.

Dated: August 11, 2009

Respectfully submitted,

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